AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims

1-21. (Cancelled)

22. (New) A telecommunications device comprising:

a transceiver which enables the device to communicate over an air interface;

a radio link control (RLC) entity which forms uplink RLC protocol data units (PDUs) for transmission over the air interface and which receives downlink RLC protocol data units (PDUs) over the air interface;

a radio link control (RLC) buffer memory configured to include a transmitter buffer for storing the uplink RLC protocol data units (PDUs) and a receiver buffer for storing the downlink RLC protocol data units (PDUs); and

characterized by:

RLC reconfiguration logic means which is arranged to reconfigure at least one of a size of a transmitter buffer window and a size of a receiver buffer window by implementing a strategy for handling at least one of (a) downlink RLC protocol data units (PDUs) which are outside a new receiver buffer window; and (2) uplink RLC protocol data units (PDUs) which are either outside a new transmitter window or whose receipt by the radio access network has not been positively acknowledged.

23. (New) The apparatus of claim 22, wherein the telecommunications device is a user equipment unit, and wherein the RLC reconfiguration logic means is operative to:

(A) discard any downlink RLC protocol data units (PDUs) which were received as being within old receiver buffer window but which are outside the new receiver buffer window; and,

(B) retain in the radio link control (RLC) buffer memory (150) any uplink RLC protocol data units (PDUs) whose receipt by the radio access network has not been positively acknowledged.

24. (New) The apparatus of claim 23, wherein the radio link control entity is further arranged to retransmit after the reconfiguration the uplink RLC protocol data units (PDUs) which were negatively acknowledged by the radio access network.

25. (New) The apparatus of claim 23, wherein the radio link control entity is further arranged not to require segmentation of a service data unit (SDU) received from a higher layer when, after the reconfiguration, the radio link control (RLC) buffer memory experiences a memory size constraint.

26. (New) The apparatus of claim 23, wherein the radio link control entity does not negatively acknowledge the downlink RLC protocol data units (PDUs) that were received in the old receiver buffer window but which are outside the new receiver buffer window.

27. (New) The apparatus of claim 22, wherein the telecommunications device is a user equipment unit, and wherein the RLC reconfiguration logic means is operative to:

(A) retain all downlink RLC protocol data units (PDUs) stored in the receiver buffer even if outside the new receiver buffer window until the receiver buffer window can be advanced; and,

(B) retain any uplink RLC protocol data units (PDUs) stored in the transmitter buffer, whose receipt by the radio access network has not been positively acknowledged, even if outside the new transmitter buffer window.

28. (New) The apparatus of claim 27, wherein the radio link control entity is further arranged to check whether receipt of a Service Data Unit (SDU) from a high layer would exceed capacity of the radio link control (RLC) buffer memory.

29. (New) The apparatus of claim 28, wherein the radio link control entity is further arranged to check for acknowledge mode RLC entities whether the buffer memory is sufficient to store acknowledge mode RLC protocol data units (AMD PDUs)

having a sequence number SN which satisfies VT(A) < SN < VT(S), wherein VT(A) is a sequence number following the last in-sequence acknowledged AMD PDU; and VT(S) is a sequence number for a next AMD PDU to be transmitted for a first time.

30. (New) The apparatus of claim 27, wherein the radio link control entity is further arranged to check whether receipt of a Protocol Data Unit (PDU) from the radio access network would exceed capacity of the radio link control (RLC) buffer memory.

31. (New) The apparatus of claim 30, wherein the radio link control entity is further arranged to check for acknowledge mode RLC entities whether the buffer memory is sufficient to store acknowledge mode RLC protocol data units (AMD PDUs) having a sequence number SN which satisfies VR(R) < SN < VR(H), wherein VR(R) is a sequence number following the last in-sequence AMD PDU received; and VR(H) is a sequence number following a highest sequence number of any received AMD PDU.

32. (New) The apparatus of claim 22, wherein the telecommunications device is a radio access network node, and wherein the RLC reconfiguration logic means is operative to:

(A) retain all downlink RLC protocol data units (PDUs) upon reconfiguration; and,

(B) retain all uplink RLC protocol data units (PDUs) upon reconfiguration.

33. (New) A method of operating a user equipment unit which communicates over an air interface with a radio access network, the method comprising the steps of:

using a radio link control entity to form uplink RLC protocol data units (PDUs) for transmission over the air interface and to receive downlink RLC protocol data units (PDUs) over the air interface;

storing the uplink RLC protocol data units (PDUs) in a transmitter buffer of a radio link control (RLC) buffer memory;

storing the downlink RLC protocol data units (PDUs) in a receiver buffer of the radio link control (RLC) buffer memory;

during a RLC reconfiguration wherein the user equipment unit is directed to reconfigure at least one of (a) a size of a transmitter buffer window to form a new transmitter buffer window having a transmitter buffer window size smaller than an old transmitter buffer window; and (b) a size of a receiver buffer window to form a new receiver buffer window having a receiver buffer window size smaller than an old receiver buffer window;

discarding any downlink RLC protocol data units (PDUs) that were received as being within the old receiver buffer window but which are outside the new receiver buffer window; and,

retaining in the radio link control (RLC) buffer memory any uplink RLC protocol data units (PDUs) whose receipt by the radio access network has not been positively acknowledged.

34. (New) The method of claim 33, comprising the step of the radio link control entity retransmitting after the reconfiguration the uplink RLC protocol data units (PDUs) which were negatively acknowledged by the radio access network.

35. (New) The method of claim 33, further comprising the radio link control entity not requiring segmentation of a service data unit (SDU) received from a higher layer when, after the reconfiguration, the radio link control (RLC) buffer memory experiences a memory size constraint.

36. (New) The method of claim 33, further comprising the radio link control entity not negatively acknowledging the downlink RLC protocol data units (PDUs) that were received in the old receiver buffer window but which are outside the new receiver buffer window.

37. (New) A method of operating a user equipment unit which communicates over an air interface with a radio access network, the method comprising the steps of:

using a radio link control entity to form uplink RLC protocol data units (PDUs) for transmission over the air interface and to receive downlink RLC protocol data units (PDUs) over the air interface);

storing the uplink RLC protocol data units (PDUs) in a transmitter buffer of a radio link control (RLC) buffer memory;

storing the downlink RLC protocol data units(PDUs) in a receiver buffer of the radio link control (RLC) buffer memory;

during a RLC reconfiguration wherein the user equipment unit is directed to reconfigure at least one of (a) a size of a transmitter buffer window to form a new transmitter buffer window having a transmitter buffer window size smaller than an old transmitter buffer window; and (b) a size of a receiver buffer window to form a new receiver buffer window having a receiver buffer window size smaller than an old receiver buffer window;

retaining all downlink RLC protocol data units (PDUs) stored in the receiver buffer even if outside the new receiver buffer window until the receiver buffer window can be advanced; and,

retaining any uplink RLC protocol data units (PDUs) stored in the transmitter buffer, whose receipt by the radio access network has not been positively acknowledged, even if outside the new transmitter buffer window.

38. (New) The method of claim 37, further comprising the step of the radio link control entity checking whether receipt of a Service Data Unit (SDU) from a high layer would exceed capacity of the radio link control (RLC) buffer memory.

39. (New) The method of claim 38, further comprising the step of the radio link control entity checking for acknowledge mode RLC entities whether the buffer memory is sufficient to store acknowledge mode RLC protocol data units (AMD PDUs) having a sequence number SN which satisfies $VT(A) < SN < VT(S)$, wherein VT(A) is a

sequence number following the last in-sequence acknowledged AMD PDU; and VT(S) is a sequence number for a next AMD PDU to be transmitted for a first time.

40. (New) The method of claim 37, further comprising the step of the radio link control entity checking whether receipt of a Protocol Data Unit (PDU) from the radio access network would exceed capacity of the radio link control (RLC) buffer memory.

41. (New) The method of claim 40, further comprising the step of the radio link control entity checking for acknowledge mode RLC entities whether the buffer memory is sufficient to store acknowledge mode RLC protocol data units (AMD PDUs) having a sequence number SN which satisfies VR(R) < SN < VR(H), wherein VR(R) is a sequence number following the last in-sequence AMD PDU received; and VR(H) is a sequence number following a highest sequence number of any received AMD PDU.

42. (New) A method of operating a radio access node of a radio access network which communicates over an air interface with a user equipment unit, the method comprising the steps of:

using a radio link control entity to form uplink RLC protocol data units (PDUs) for transmission over the air interface and to receive downlink RLC protocol data units (PDUs) over the air interface;

storing the uplink RLC protocol data units (PDUs) in a transmitter buffer of a radio link control (RLC) buffer memory;

storing the downlink RLC protocol data units (PDUs) in a receiver buffer of the radio link control (RLC) buffer memory;

during a RLC reconfiguration, reconfiguring at least one of a size of a transmitter buffer window and a size of a receiver buffer window by:

(A) retaining all downlink RLC protocol data units (PDUs) upon reconfiguration; and,

(B) retaining all uplink RLC protocol data units (PDUs) upon reconfiguration.